

Name: _____

at1113exam: Expand, factor, and solve quadratics (v338)

1. Expand the following expression into standard form.

$$(4x - 3)(4x + 3)$$

$$16x^2 + 12x - 12x - 9$$
$$16x^2 - 9$$

2. Expand the following expression into standard form.

$$(4x - 5)^2$$

$$16x^2 - 20x - 20x + 25$$
$$16x^2 - 40x + 25$$

3. Expand the following expression into standard form.

$$(9x - 8)(5x + 4)$$

$$45x^2 + 36x - 40x - 32$$
$$45x^2 - 4x - 32$$

4. Solve the equation.

$$(7x + 6)(9x + 5) = 0$$

$$x = \frac{-6}{7} \quad x = \frac{-5}{9}$$

5. Factor the expression.

$$16x^2 - 81$$

$$(4x - 9)(4x + 9)$$

6. Solve the equation with factoring by grouping.

$$15x^2 + 20x + 6x + 8 = 0$$

$$(5x + 2)(3x + 4) = 0$$

$$x = \frac{-2}{5} \quad x = \frac{-4}{3}$$

7. Solve the equation.

$$10x^2 - 53x + 13 = 3x^2 + 4x + 5$$

$$7x^2 - 57x + 8 = 0$$

$$(7x - 1)(x - 8) = 0$$

$$x = \frac{1}{7} \quad x = 8$$

8. Factor the expression.

$$x^2 + 5x - 36$$

$$(x + 9)(x - 4)$$